

Blackwater Event off Southwest Florida in Winter 2002

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In early 2002, commercial fishers reported an area of "black water" in southwest Florida north of the Keys. The water was described as being devoid of marine life, dark, with gelatinous blobs. The event was most intense in January and February. The first reports to appropriate agencies came in March and so the first water samples were taken when the event was beginning to decline. Considerable concern existed that this bloom was anthropogenic in origin, and potentially dangerous to fisheries. In order to reconstruct the event, satellite data was used together with the available field data. Cruises in January and February, not intended to sample the blackwater, provide information on actual chlorophyll, nutrients, and salinity. Satellite provides additional estimates of chlorophyll, dissolved pigments, the color of the water, and information on transport. Three events co-occurred to cause the event: a local rare winter chlorophyll bloom, a bloom transported downcoast, and an influx of water rich in dissolved pigments. Moderate and easterly winds favored maintenance of water in the area, leading to the development of a ctenophore bloom, the likely source of the gelatinous nature. The event appears to be the result of a confluence of several natural events.